

REMARKS

The claims are 1 to 6.

The above amendment is responsive to points set forth in the Official Action.

Firstly, undersigned and assignee's representatives acknowledge the helpful interview with Examiner Moore on June 28, 2007. Representations made by undersigned and assignee's representatives are included in the remarks below.

The Examiner Interview Summary Record generally sets forth the substance of the interview.

Claims 1 and 6 have been rejected under 35 U.S.C. 102(b) as being anticipated by Gutek et al.

Further, claims 2, 3 and 5 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Gutek et al.

These rejections are respectfully traversed.

The present invention is directed to a composition which is crosslinkable to form a pressure sensitive adhesive.

The composition contains three essential components:

- (A) a polyoxyalkylene polymer having at least one alkenyl group in one molecule,
- (B) a compound having 1 to 3 hydrosilyl groups on average in one molecule, and
- (C) a hydrosilylation catalyst.

The presently claimed composition is capable of being crosslinked i.e. is crosslinkable to form a pressure sensitive adhesive composition.

This will require that at least some of the (A) and (B) components have at least 2 alkenyl/SiH groups to ensure that a crosslinked product is obtainable.

In contrast, Gutek et al. discloses silicone polymers which are not crosslinkable due to the fact that the resultant product, such as that of Example 1, lacks free allyl groups needed for crosslinking.

It is further apparent that if the silicone polymers of Gutek were crosslinkable, they would be of limited utility in forming emulsions, which is the object of Gutek.

Accordingly, the rejections on Gutek are untenable and should be withdrawn.

Claims 1, 5 and 6 have been rejected under 35 U.S.C. 102(b) as being anticipated by JP 2000-302981 (JP '981).

Further, claims 1 to 6 have been rejected under 35 U.S.C. 103(a) as being unpatentable over JP '981.

These rejections are also respectfully traversed.

JP '981 discloses adhesive compositions but fails to appreciate the importance of component (B) having 1 to 3 hydrosilyl groups on average, per molecule, on the pressure sensitive adhesive properties of the resultant composition. See page 9, lines 1 to 16 of the present specification in this regard. It is believed that a suitable crosslinking density of the cured product obtained by the presently claimed composition is effective to achieve good adhesive properties because component (B) contains 1 to 3 hydrosilyl groups on average per one molecule.

On page 1 of the Abstract of JP '981, reference is made to component (B) having at least 2 hydrosilyl groups in the molecule but no concrete examples are set forth.

In Formula 4 set forth on page 12 of the machine translation, there is no subscript in the number of hydrosilyl groups in the molecule, which means one hydrosilyl group per molecule.

In fact, this lack of subscript resulted from a typographical error, as will be explained below, and the correct formula should reflect that 5 hydrosilyl groups are present.

However, when 5 hydrosilyl groups are present, the resultant adhesive properties are undesirable as can be seen from the present specification. In this regard, compare compound (B-2) having 3 hydrosilyl groups on average with compound B-4 having 5 hydrosilyl groups on average. These compounds are disclosed on page 16.

The pressure sensitive adhesive properties of the Examples in accordance with the present invention as set forth in Table 1 on page 18 can be seen from the data on page 20.

As summarized in the paragraph bridging pages 20 and 21 and as shown in Examples 1 to 6, pressure sensitive adhesive composition wherein component (B) contains 3 hydrosilyl groups on average in one molecule exhibit superior pressure sensitive adhesive properties as compared to the composition where component (B) contains 5 hydrosilyl groups on average in one molecule.

This finding was completely unexpected.

In support of the fact that the compound of Formula 4 on page 12 of the machine translation of JP '981 showing only one hydrosilyl group per molecule resulted from a typographical error as explained in the attached Rule 132 Declaration of Masato KUSAKABE, the first named inventor in JP '981.

In this regard, a compound having one SiH per molecule cannot meet the physical properties required by JP '981 e.g. see Table 1 on page 12 of the machine translation as well as paragraph [0001] on page 1.

The reason why the physical properties as described in [Table 1] of JP '981 cannot be obtained when "a compound having only one SiH group in a molecule" is used as the compound of Formula 4 in the Examples of JP '981 is as follows.

When only one SiH group is present in the molecule of the compound of Formula 4, the compound only acts as an end-capping agent for a polymer (a starting material) having alkenyl groups at the ends. Consequently, the thus-obtained reaction product is still in the form of a liquid. In the Examples of '981, the polymer having alkenyl groups at the ends is in the form of a liquid. Therefore, it is obvious that the polymer is still in the form of a liquid even after end-capping with such a low molecular weight compound as shown in Formula 4 (i.e., a compound having only one SiH group in a molecule). That the polymer having alkenyl groups at the ends is in the form of a liquid can be readily understood from the fact that viscosity was measured in Table 1.

In the Examples of JP '981, the time required for formation of a gel was measured so as to evaluate curing property. If the product obtained in JP '981 is in the form of a liquid, such measurement is impossible.

Furthermore, in the Examples of JP '981, dumbbell samples were prepared for the measurement of the cured products. It is impossible to punch out a dumbbell sample from a liquid sample.

* unexecuted with executed copy to follow.

For the above-mentioned reasons, it is evident that the compound shown by Formula 4 in the Examples of JP '981 contains a typographical error and should reflect the fact that it contains five and not one hydrosilyl group per molecule.

In sum,

- 1) the compound of Formula 4 of JP '981 having only one hydrosilyl group cannot form a suitable pressure sensitive adhesive since no crosslinking would be possible for such compound, in contrast to that presently claimed; and
- 2) the compound of Formula 4 of JP '981 having five hydrosilyl groups, on average, per molecule is inferior to that presently claimed having 1 to 3 hydrosilyl groups, on average, per molecule, in forming a pressure sensitive adhesive.

Thus, the cited references fail to disclose or suggest a crosslinkable composition as presently claimed containing 1 to 3 hydrosilyl groups on average, which composition, when crosslinked, exhibits excellent pressure sensitive adhesive properties.

No further issues remaining, allowance of this application is respectfully requested.

If the Examiner has any comments or proposals for expediting prosecution, please contact undersigned at the telephone number below.

Respectfully submitted,

Kazuhiko UEDA et al.

By:


Matthew M. Jacob
Registration No. 25,154
Attorney for Applicants

MJ/aas/asd
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
July 6, 2007